



TFW 1772

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

8

Application Number

10/542,813

Filing Date

July 20, 2005

First Named Inventor

Karine VALLE

Art Unit

1772

Examiner Name

Unassigned

Attorney Docket Number

BRV.10042

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	International Search Report; French Search Report; and translation of the International Preliminary Report on Patentability
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application		
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

Remarks

The Director is hereby authorized to charge any appropriate fees that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-3218. This paper is submitted in duplicate.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Hutchison Law Group PLLC		
Signature	<i>Mary B. Grant</i>		
Printed name	Mary B. Grant		
Date	July 20, 2006	Reg. No.	32,176

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature

Typed or printed name

Jennie Shead

Date

July 20, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

The cited documents are being submitted within three (3) months of the filing or entry of the national stage of this application or before the first Office Action on the merits, whichever is later. Since these documents are being filed within the time period set forth in 37 C.F.R. § 1.97(b), no fee or statement is required.

The Director is hereby authorized to charge any appropriate fees that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-3218.

Respectfully submitted,

HUTCHISON & MASON PLLC

Date: 7/20/06

By: Mary B. Grant
Mary B. Grant
Registration No. 32,176

P.O. Box 31686
Raleigh, NC 27612
+1.919.829.9600

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on 07/20/2006

Jennie Snead
(Typed Name of Person Signing Certificate)

Snead
(Signature of Person Signing Certificate)

Date of Signing: 07/20/2006



Patent
Attorney Docket No. BRV.10042

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Karine VALLE et al.

Application No.: 10/542,813

Group Art Unit: 1772

Filing or 371(c) Date: July 20, 2005

Examiner: Unassigned

Title: Conductive Organic-Inorganic Hybrid
Material Comprising a Mesoporous Phase,
Membrane, Electrode and Fuel Cell

Confirmation No.: 8622

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. A copy of each of the documents cited and required by 37 C.F.R. § 1.98 is enclosed.

Some of the listed documents were cited in the International Search Report and in a Search Report from the French Patent Office in a corresponding prior application, copies of which are enclosed. A copy of the English translation of International Preliminary Report on Patentability is also enclosed.

This Information Disclosure Statement contains information which is not in the English language but was cited in a search report or other action by a foreign patent office in a counterpart foreign application. In accordance with MPEP § 609 IIIA(3), an English language version of the search report or action which indicates the degree of relevance found by the foreign office is being submitted herewith. English language abstracts or claims, or English language equivalent applications also have been provided according to MPEP § 609 IIIA(3), where available.

To assist the Examiner, the documents are listed on the attached form PTO/SB/08. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

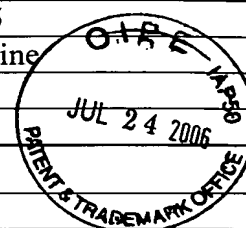
Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/542,813
Filing or 371(c) date	July 20, 2005
First Named Inventor	VALLE, Karine
Group Art Unit	1772
Examiner Name	Unknown



Sheet 1 of 4

Attorney Docket No: BRV.10042

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document
	5 523 181	06/04/1996	Stonehart et al.
	2002/0093008	07/18/2002	Kerres et al.
	2004/0053060	03/18/2004	Roziere et al.
	6 059 943	05/09/2000	Murphy et al.

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Abstract, Translation, English Language Equivalent or Search Report
	FR 2 811 323	01/11/2002		Search Report English Language Equivalent US 2004/0053060 provided
	DE 199 43 244	03/15/2001		Search Report English Language Equivalent CA 2 384 045 provided
	EP 0 875 524	11/04/1998		Search Report
	CA 2 384 045	03/22/2001		English Language Equivalent of DE 199 43 244
	WO 99/37705	07/29/1999		Search Report
	WO 00/63995	10/26/2000		
	WO 01/54216	07/26/2001		
	WO 02/23646	03/21/2002		
	WO 02/05370	01/17/2002		English Language Equiv. 2004/0053060 provided
	JP 2000-090946	03/31/2000		English Language Abstract provided

EXAMINER**DATE CONSIDERED**

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

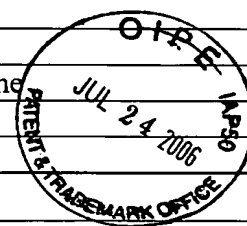
Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/542,813
Filing or 371(c) date	July 20, 2005
First Named Inventor	VALLE, Karine
Group Art Unit	1772
Examiner Name	Unknown



Sheet 2 of 4

Attorney Docket No: BRV.10042

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Abstract, Translation, English Language Equivalent or Search Report
	ADJEMIAN, K. T. et al., "Silicon oxide Nafion composite membranes for proton-exchange membrane fuel cell operation at 80-140 degrees C", Journal of the Electrochemical Society 2002, 149, A256-A261.	
	ALBERTI, G. et al. "Solid state protonic conductors, present main applications and future prospects", Solid State Ionics 2001, 145, 3-16.	
	BARADIE, B. et al., "Hybrid Nafion (R)-inorganic membrane with potential applications for polymer electrolyte fuel cells", Journal of Electroanalytical Chemistry 2000, 489, 101-105.	
	BONNET, B. et al., "Hybrid organic-inorganic membranes for a medium temperature fuel cell", Journal of New Materials for Electrochemical Systems 2000, 3, 87-92.	
	COLOMER, M. T. et al., "High porosity silica xerogels prepared by a particulate sol-gel route: pore structure and proton conductivity", Journal of Non-Crystalline Solids 2001, 290, 93-104.	
	CORRIU, R. J. P. et al., "Ordered SBA-15 mesoporous silica containing phosphonic acid groups prepared by a direct synthetic approach", Chemical Communications 2001, 763-764.	
	DIAZ, I. et al., "A novel synthesis route of well ordered, sulfur-bearing MCM-41 catalysts involving mixtures of neutral and cationic surfactants", Microporous & Mesoporous Materials 2001, 44, 295-302.	
	FENG, Q. W. et al., "Synthesis of polystyrene-silica hybrid mesoporous materials via the nonsurfactant-templated sol-gel process", Journal of Materials Chemistry 2000, 10, 2490-2494.	
	GENOVA-DIMITROVA, P. et al., "Ionomeric membranes for proton exchange membrane fuel cell (PEMFC): sulfonated polysulfone associated with phosphatoantimonic acid", Journal of Membrane Science 2001, 185, 59-71.	
	HARMER, M. A. et al., "Nafion resin-silica nanocomposite solid acid catalysts. Microstructure-processing-property correlations", Green Chemistry 2000, 2, 7-14.	
	JONES D. J. et al., "Recent advances in the functionalisation of polybenzimidazole and polyetherketone for fuel cell applications", Journal of Membrane Science 2001, 185, 41-58.	
	LaCONTI, A.B., "Protein exchange membrane electrochemical capacitors and fuel cells for pulse power applications", Proceedings for the international Power Sources Symposium, June 1992, pp. 298-301.	Search Report
	LIM, M. H. et al. "Synthesis of ordered microporous silicates with organosulfur surface groups and their applications as solid acid catalysts", Chemistry of Materials 1998, 10, 467-470.	
	MARGOLESE, D. et al., "Direct syntheses of ordered SBA-15 mesoporous silica containing sulfonic acid groups", Chemistry of Materials 2000, 12, 2448-2459.	

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

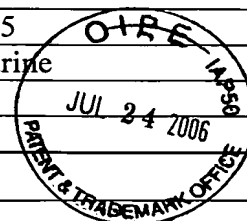
Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/542,813
Filing or 371(c) date	July 20, 2005
First Named Inventor	VALLE, Karine
Group Art Unit	1772
Examiner Name	Unknown



Sheet 3 of 4

Attorney Docket No: BRV.10042

	MATSUDA, A. et al., "Proton conductivity of acid-impregnated mesoporous silica gels prepared using surfactants as a template", Solid State Ionics 2001, 145, 135-140.	
	MATSUDA, A. et al., "Sol-gel derived porous silica gels impregnated with sulfuric acid - Pore structure and proton conductivities at medium temperatures, Journal of the Electrochemical Society 2002, 149, E292-E297	
	MAURITZ, K. A. "[Perfluorosulfonate ionomer]/silicate hybrid membranes via base-catalyzed in situ sol-gel process for tetraethylorthosilicate", Journal of Membrane Science 2000, 168, 39-51.	
	MELDE, B. J. et al. "Mesoporous sieves with unified hybrid inorganic/organic frameworks", Chemistry of Materials 1999, 11, 3302-3308.	
	MIKHAILENKO, S. et al., "Solid electrolyte properties of sulfonic acid functionalized mesostructured porous silica", Microporous & Mesoporous Materials 2002, 52, 29-37.	
	MINKE, M. R. et al. "Surface area and porosity engineering of alkylene-bridged methoxysilanes"; 222nd American Chemical Society National Meeting, Washington, D. C.: Chicago, US, August 26-30, 2001.	Abstract Only
	MIYAKE, N. et al., "Evaluation of a sol-gel derived Nafion/silica hybrid membrane for proton electrolyte membrane fuel cell applications - I. Proton conductivity and water content", Journal of the Electrochemical Society 2001, 148, A898-A904.	
	NISHIWAKI, S. et al., "Preparation and proton conductivity of surfactant-templated mesoporous silica gels impregnated with protonic acids", Journal of the American Ceramic Society 2000, 83, 3004-3008.	
	PARK, Y. et al. "Proton exchange nanocomposite membranes based on 3-glycidoxypolytrimethoxysilane, silicotungstic acid and alpha-zirconium phosphate hydrate", Solid State Ionics 2001, 145, 149-160.	
	SAYARI, A. et al., "Periodic mesoporous silica-based organic - Inorganic nanocomposite materials", Chemistry of Materials 2001, 13, 3151-3168.	
	STAITI, P. "Proton conductive membranes constituted of silicotungstic acid anchored to silica-polybenzimidazole matrices", Journal of New Materials for Electrochemical Systems 2001, 4, 181-186.	
	SOLER-ILLIA, GJ. et al., "Chemical strategies to design textured materials : From microporous and mesoporous oxides to nanonetworks and hierarchical structures", Chemical Reviews, 2002, 102(11) : 4093-4138.	
	STANGAR, U. L. et al., "Proton-conducting sol-gel hybrids containing heteropoly acids", Solid State Ionics 2001, 145, 109-118.	
	VICHI, F. M. et al., "Nanopore ceramic membranes as novel electrolytes for proton exchange membranes", Electrochemical & Solid-State Letters 1999, 2, 313-316.	
	WANG, H. et al., "Nafion-bifunctional silica composite proton conductive membranes", Journal of Materials Chemistry 2002, 12, 834-837.	
	YANG, C. et al. "Composite Nafion/zirconium phosphate membranes for direct methanol fuel cell operation at high temperature", Electrochemical & Solid-State Letters 2001, 4, A31-A34.	

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. * Applicant's unique citation designation number (optional) * Applicant is to place a check mark here if English language Translation is attached

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

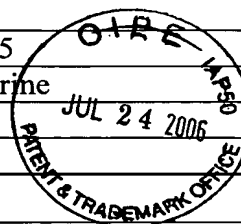
Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/542,813
Filing or 371(c) date	July 20, 2005
First Named Inventor	VALLE, Karine
Group Art Unit	1772
Examiner Name	Unknown



Sheet 4 of 4

Attorney Docket No: BRV.10042

ZOPPI, R.A. et al., "Electrochemical impedance studies of hybrids of perfluorosulfonic acid ionomer and silicon oxide by sol-gel reaction from solution", Journal of Electroanalytical Chemistry 1998, 445, 39-45.
--

EXAMINER**DATE CONSIDERED**

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached